scrimmage against the medical profession with: 'However, . . . there is still the tendency to state and analyse the law wholly in terms of duties, the duties of doctors and perhaps of patients, so as to avoid what is perceived (wrongly) as the more oppressive language of rights'. . . . Hence, 'I will adopt here a frank assertion of rights inherent in the doctor-patient relationship'. In this he relies on dicta of Lord Scarman in Sidaway, where he grounded the doctor's duty to inform in the patient's legal right to accept or reject the treatment proposed (page 202). But Scarman also asserted (page 194) that the 'proper place' of a duty to warn a patient of risk is 'as an aspect of the duty of care owed by the doctor to his patient'. And the Lords, in their judgements, preferred the language of duties also, to Kennedy's evident regret.

However, Kennedy allows that the rights which he champions are prima facie or presumptive rights, not absolute; and that there are circumstances in which a patient's 'rights' may require that he be not informed. It is therefore by no means clear what is gained by a change of language: the doctor is still left with the duty of weighing and serving the patient's interests within the overall protection of the patient's liberties safeguarded by the law.

Kennedy is clearly provoked by two decided cases of non-consensual sterilisation in which those liberties were, in his view, not safeguarded: re B (1987) and re F (1989), both of mentally handicapped women, the first a minor. He profoundly regretted the judgement in re B in terms of best interests, and those evidenced by untested reliance upon expert witnesses. In the examination of re F Kennedy the common lawyer and Kennedy the human rights lawyer seem to be at odds. To the statement of the law contained in the Lord's judgement - that no one has authority to consent to the treatment of another adult, albeit incompetent, and therefore no court can; but that, since this would leave the incompetent legally untreatable, treatment could be declared lawful if justified by necessity or as being in the public interest, which would include the patient's interest - and to the practice directions given in consequence, Kennedy gives reluctant approval: they represent 'a significant public commitment to respect for human rights', 'although not overtly speaking the language of human rights'. But for the judgement on the case itself, 'approached from the perspective of human rights on the basis of first principles', he cannot say that the Lords' view 'that non-consensual sterilisation is lawful subject to certain conditions being satisfied' was valid and correct; he regretted it. Conversely, he says, it is an unjustifiable violation of human rights if carried out for non-therapeutic reasons and, as a consequence, should be declared unlawful' (page 407, italics his). On this he would stand against all collusion with utility and pragmatism despite his allowance that what is prima facie unlawful might in certain circumstances be declared lawful (page 410).

In all this Kennedy re-appears as the consistent protector of the patient against his old enemy, 'medical paternalism', and against courts which collusively decide cases on patients' interests as defined by medical witnesses: 'After all, is it not the role of one professional elite to protect another?' And this protection, he maintains, requires the assertion of 'rights'. But does it? For the human rights lawyer, he says, the 'starting point for analysis will, as ever, be a concern to protect the vulnerable from real or potential oppression or exploitation. In our case, as in most, this will translate as the need to justify any medical intervention by reference to carefully articulated criteria' (pages 396-397). What, then, is new? Is it not already the function of the courts of common law to protect the liberties of the subject? But read on: 'Oppression or exploitation may take other forms. It must be recognised that it is equally oppressive to deny an incompetent person treatment which would otherwise be judged appropriate. Whatever criteria are developed to protect the incompetent must, therefore, bear in mind that the cause of human rights is not served by so concentrating on the protection of the incompetent that it is forgotten that a significant means of protecting him may be to treat him'. Have we not returned to a familiar moral calculus, an exercise in moral reasoning, basic to the ethics and law of medical practice, into which the rhetoric of rights is an unnecessary intrusion?

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## Introduction to risk calculation in genetic counselling

Ian D Young, 160 pages, Oxford, 1991, Oxford University Press, £22.50 hb, £12.50 pb

Only a few years ago the parents of boys with sex-linked genetic conditions might have been given a 50/50 chance that any further boys they had would be affected. The rapid advances in molecular biology have introduced crucial new information from DNA marker studies which enable more precise estimations of carrier and recurrence risks to be made. Calculating genetic risks has always been complicated but the advent of DNA probes and linked markers, coupled with the need to take account of cross-over rates and the application of screening for specific mutation points, has added further complexities. In a field that is changing so rapidly an up-to-date book that deals with the mathematical aspects of genetic counselling is badly needed.

This volume from Ian Young will be a welcome addition to the tools available to other clinical geneticists. Dr Young has succeeded in his aim of producing a user-friendly guide to the methods for risk calculation in genetic counselling. Separate chapters deal with autosomal dominant, autosomal recessive and sex-linked inheritance patterns and the incorporation of Bayesian calculations. The book also includes discussion of the factors that influence the transmission risks of chromosomal re-arrangements and their likely viability. The book has many worked examples with family pedigrees that are clearly drawn out and annotated, to lead the nonmathematician through to a safe risk estimation.

Although each example explained line by line, the background to each concept is perhaps too brief confidently to allow everyone to master all the techniques from scratch. The book should not be regarded as a teach-yourself-guide for everyone, but rather as one which can consolidate previous teaching. It will serve well as a textbook for those training in medical genetics and will be an essential reference for clinical problems. The author's approach to problem-solving becomes easy to follow and is reassuringly consistent throughout the book. The layout of the chapters and the concise index enable rapid selection of model examples to use in clinical practice. Inclusion of recurrence risks in chromosomal anomalies and the viability of unbalanced re-arrangements improve the usefulness of this wellpriced book. Young has included mention of variable expression and incomplete penetrance as well as the newer issues of gonadal mosaicism, imprinting and the use of mutation detection for carrier-screening in cystic fibrosis. He has included useful tables to help short-cut risk estimations in some common situations.

The book is efficiently referenced and I could find just one error, in table 5.5. My only criticism of the book is that no greater mention is made of the use of computer programmes for tackling the more complex risk estimations. This may have been beyond the scope of the book, but after reading it one ought to be ready for this. Although not of direct relevance to medical ethics, it would be unethical to offer modern genetic counselling without being very familiar with the contents of this book.

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## Created from animals: the moral implications of Darwinism

James Rachels, 245 pages, Oxford, 1991, Oxford University Press, £6.99

In choosing to examine the moral implications of 'Darwinism' rather than the moral implications of 'evolution' generally, Rachels makes apparent his affinity for and debt to Darwin's own ideas about evolutionary forces and their relation to human values. While Rachels does not abstain from acknowledging Darwin's errors or miscalculations where appropriate, he does develop argument from specifically Darwinian claims, with the result that the book differs in at least one significant aspect from many previous attempts to consider morality in the right of evolution. Like Darwin,

Rachels contends that adaptation to environment is not directed to any particular end. Assertions about 'more evolved' and 'less evolved' species, or the 'tendency' of nature to move towards 'higher forms', therefore, cannot be defended. This calls into question assumptions about human values based on our 'higher' standing among other animal groups. If we accept Darwinism, argues Rachels, then traditional Western morality, inspired and bound by beliefs about human dignity, must be rejected or revised. Since medical ethics itself relies in part upon theoretical frameworks within traditional morality, Rachels's argument poses a challenge to clinical medical practice, as well as to medical research in general.

It is to Rachels's credit that he takes pains to confront, explicate and ultimately avoid the logical trap of deriving value from fact, or moral prescriptions from scientific descriptions about the world. Scientific information, rather than strictly entailing moral imperatives, provides reasons for accepting or rejecting a certain theory or belief. Rachels seeks to demonstrate that our traditional belief in human dignity rests upon one, or the other, or both of two major theses; and that if these theses can be undermined by facts about evolutionary biology, then so can the belief about human dignity. The theses are that humans are made in the image of God and that human beings are uniquely rational. For Rachels, discrediting them reveals the frailty of human dignity, a frailty which weakens both the value we place on all human lives and the centrality of human concerns within the wider biological community.

Created from animals offers a lucid, cogent and disciplined argument for a particular perspective on morals. Its focused and detailed pursuit of a few prominent points constitutes its strength. Early chapters on Darwin and on the potential effect of science on ethics are witty and informative. The later chapters introduce and develop Rachels's own theory and these too provide an engaging perspective on ethical and scientific practice.

However, Rachels's claims relation to the 'human beings are uniquely rational' thesis may be contentious. In this chapter Rachels draws on research about and involving animals to support his claim that a capacity for rationality, once thought

to be the province of human beings, can also be attributed to other animals. The difference between human beings and other animals based on rationality thus becomes a difference of degree rather than of kind, making suspect the predication of dignity to humans alone. Rachels quite rightly notes that the entire field of experimental psychology assumes a continuity between humans and other animals by relying on animal subjects to furnish information about human behaviour. What is questionable is not Rachels's attribution of rationality to animals (though some readers will want to dispute its continuity with human rationality) but rather his documentation of the scientific evidence for it.

For example, in suggesting that rhesus monkeys display altruism, Rachels refers to an experiment published in 1964. In another case, he highlights the general intelligence of rhesus monkeys by citing their ability to solve problems not unlike those found on standardised intelligence tests for humans. This is fine, except that the source of this allegation is an experiment reported in 1965. Rachels's claims about a continuity between human and animal rationality would be more convincing if buttressed by recent scientific research. As it stands, he does not include references to current work in the major journals, which leaves one wondering whether or not the results invoked by Rachels have been confirmed or denied during the last twenty or thirty

Still, Rachels argues well for his own theory of 'moral individualism', which privileges individual characteristics over species membership in determining moral considerability. In calling for a new principle of equality, Rachels provides an account of relevant differences which determines when we can and cannot distinguish between humans and animals. While he does not approach his topic in the spirit of applied philosophy, Rachels offers a theory which extenuates the belief in human dignity that underlies morality and medical practice. Many will be uncomfortable with his conclusions about the decreased value of human life (discussed partly in terms of euthanasia, suicide and right-tolife) and the increased value of animals. Nevertheless, Rachels's book is a formidable challenge to the doctrine of human dignity. It will now be up to the doctrine's defenders to re-establish, if at all possible, a more